

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A pseudo 3D image generating apparatus that generates a pseudo three dimensional image of a subject from ~~a plurality of~~ at least two images captured in ~~various~~ different illumination conditions of the subject, comprising:

an image storing unit that stores the at least two images of the subject captured in the different illumination conditions; and

a depth computing unit that computes a pseudo depth value ~~for a plurality of corresponding pixels, each of the stored images containing one of the corresponding pixels~~ for each pair of corresponding pixels of the at least two images of the subject, based on an operation between pixel values of the corresponding pixels, thereby to form the pseudo three dimensional image of the subject;

wherein

the different illumination conditions in which the at least two images of the subject are captured are generated by means of a single light source; and

at least two different pseudo depth values are given to the pairs of the corresponding pixels of the at least two images of the subject.

Claim 2 (Currently Amended): The pseudo 3D image generating apparatus as claimed in claim 1, wherein

said depth computing unit reduces the resolution of the at least two images to form resolution-reduced images, and computes the pseudo depth value for the corresponding pixels based on an operation between the pixel values of the corresponding pixels of the resolution-reduced images.

Claim 3 (Currently Amended): The pseudo 3D image generating apparatus as claimed in claim 2, wherein

said depth computing unit smoothes the images, ~~and reduces the resolution of the images before reducing the resolution of the at least two images.~~

Claim 4 (Currently Amended): The pseudo 3D image generating apparatus as claimed in claim 1, wherein

said depth computing unit assigns a discrete depth value to each pair of corresponding pixels of the at least two images of the subject pixel by comparing at least one of the difference and the ratio between the pixel values of the corresponding pixels of the at least two images with a predetermined threshold value ~~predetermined for each pixel.~~

Claim 5 (Original): The pseudo 3D image generating apparatus as claimed in claim 1, further comprising an object extracting unit that extracts an object of the subject based on the pseudo depth values assigned to the corresponding pixels, the pseudo depth value being computed by said depth computing unit.

Claim 6 (Currently Amended): The pseudo 3D image generating apparatus as claimed in claim 5, wherein

said depth computing unit assigns a discrete depth value to each pair of corresponding pixels of the at least two images of the subject pixel by comparing at least one of the difference and the ratio between the pixel values of the corresponding pixels of the at least two images with a predetermined threshold value ~~predetermined for each pixel;~~ and

said object extracting unit extracts adjacent pixels of one of the images as the object, the assigned discrete depth values of the adjacent pixels being equal to each other.

Claim 7 (Currently Amended): The pseudo 3D image generating apparatus as claimed in claim [[6]] 1, wherein

said depth computing unit fits a continuous depth function to the object based on the discrete depth values.

Claim 8 (Original): The pseudo 3D image generating apparatus as claimed in claim 6, wherein

said depth computing unit smoothes the discrete depth values of the pixels in a predetermined range in one of the entire image, the peripheral portion of the object, and the object.

Claim 9 (Currently Amended): A method of generating a pseudo 3D image of a subject from ~~a plurality of~~ at least two images captured in ~~various~~ different illumination conditions of the subject, the method comprising the steps of:

capturing the at least two images of the subject in the different illumination conditions generated by means of a single light source;

storing the images; and

computing a pseudo depth value ~~for a plurality of corresponding pixels, each of the stored images containing one of the corresponding pixels~~ for each pair of corresponding pixels of the at least two images of the subject, based on an operation between pixel values of the corresponding pixels, thereto to form the pseudo three dimensional image of the subject, wherein

at least two different pseudo depth values are given to the pairs of the corresponding pixels of the at least two images of the subject.

Claim 10 (Currently Amended): The method as claimed in claim 9, wherein the step of computing a pseudo depth value further comprises the steps of:

reducing the resolution of the at least two images to form resolution-reduced images;
and

computing the pseudo depth value for the corresponding pixels based on an operation between the pixel values of the corresponding pixels of the resolution-reduced images.

Claim 11 (Currently Amended): The method as claimed in claim 10, wherein, ~~when the resolution of the images is reduced,~~ the images are smoothed before the resolution of the at least two images is reduced.

Claim 12 (Currently Amended): The method as claimed in claim 9, wherein a discrete depth value is assigned to each ~~pixel~~ pair of corresponding pixels of the at least two images of the subject by comparing at least one of the difference and the ratio between the pixel values of the corresponding pixels of the at least two images with a predetermined threshold value ~~predetermined for each pixel~~.

Claim 13 (Original): The method as claimed in claim 9, further comprising the step of extracting an object of the subject based on the pseudo depth values assigned to the corresponding pixels.

Claim 14 (Original): The method as claimed in claim 13, wherein

a discrete depth value is assigned to each pixel by comparing one of the difference and the ratio between the pixel values of the corresponding pixels with a threshold value predetermined for each pixel in the step of computing the depth value; and

adjacent pixels of one of the images are extracted as an object in the step of extracting the object, the assigned discrete depth values of the adjacent pixels being equal to each other.

Claim 15 (Currently Amended): The method as claimed in claim [[14]] 9, further comprising the step of fitting a continuous depth function to the object based on the computed discrete depth values.

Claim 16 (Original): The method as claimed in claim 14, further comprising the step of smoothing the discrete depth values of the pixels in a predetermined range in one of the entire image, the peripheral portion of the object, and the object.

Claim 17 (Canceled).

Claim 18 (Currently Amended): A computer readable recording medium storing a computer program that causes a computer to generate a pseudo 3D image of a subject from a plurality of at least two images captured in ~~various~~ different illumination conditions of the subject, said computer program comprising the steps of:

capturing the at least two images of the subject in the different illumination conditions generated by means of a single light source;

storing the images; and

computing a pseudo depth value ~~for a plurality of corresponding pixels, each of the~~
~~stored images containing one of the corresponding pixels~~ for each pair of corresponding
pixels of the at least two images of the subject, based on an operation between pixel values of
the corresponding pixels, thereby to form the pseudo three dimensional images of the subject,
wherein
at least two different pseudo depth values are given to the pairs of the corresponding
pixels of the at least two images of the subject.